

IN THE CLAIMS

1. (currently amended) A method of performing service diagnostics on appliances, the method comprising:

connecting a diagnostic interface ~~within a building housing an appliance~~ to a local area appliance network interconnecting a plurality of appliances, wherein the diagnostic interface includes a display;

accessing ~~the appliance~~ at least one appliance in the local area appliance network;

performing a service diagnosis of the at least one appliance through the diagnostic interface over the local area appliance network using service functions in the at least one appliance;

implementing the diagnostic interface within a single device including the display, a processing circuitry generating service commands to perform the service diagnosis, and a power line carrier modem configured to modulate data to communicate the data over an alternating current (AC) power line; and

servicing, by the diagnostic interface, the at least one appliance via the power line carrier modem, said servicing comprising at least one of adjusting a characteristic of the at least one appliance and displaying to a technician the service diagnosis.

2. (original) The method of claim 1 wherein the local area appliance network comprises a power line carrier system.

3. (currently amended) The method of claim 1 wherein accessing further comprises accessing a dedicated appliance controller in ~~an appliance~~ at least one appliance.

4. (previously presented) The method of claim 1 wherein the service functions comprise safety functions, parameter functions, and appliance status functions.

5. (previously presented) The method of claim 1 further comprising implementing said diagnostic interface in a computer.

6. (canceled)

7. (original) The method of claim 1 further comprising connecting to a remote system to retrieve service diagnostic information.

8. (currently amended) The method of claim 1 wherein performing service diagnosis includes diagnosing and servicing the at least one appliance based on the appliance diagnosis.

9. (currently amended) The method of claim 8 wherein servicing the at least one appliance comprises patching appliance firmware.

10. (currently amended) The method of claim 8 wherein servicing the at least one appliance comprises adjusting appliance parameters.

11. (currently amended) The method of claim 1 further comprising maintaining an external database of appliance information based on diagnosis of the at least one appliance.

12. (currently amended) A diagnostic interface for performing service diagnostics on appliances, the diagnostic interface comprising:

a display for viewing diagnostic and service information;

processing circuitry for generating service commands for an appliance; and

a power line carrier communication interface configured to be connected to a local area appliance network ~~within a building housing the appliance~~ interconnecting a plurality of appliances, wherein said power line carrier communication interface facilitates transmitting the service commands to ~~the appliance~~ the plurality of appliances and receiving appliance diagnostic results on a power line carrier communication system, and said diagnostic interface implemented within a single device including said display, said processing circuitry generating the service commands to service the at least one appliance, and said power line

communication interface configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to service the at least one appliance via said power line carrier communication interface by at least one of adjusting a characteristic ~~of the~~ of at least one appliance and displaying to a technician the appliance diagnostic results.

13. (currently amended) The diagnostic interface of claim 12 further comprising an appliance bus interface for communicating with the at least one appliance.

14. (original) The diagnostic interface of claim 12 further comprising a remote service center interface.

15. (original) The diagnostic interface of claim 14 wherein the diagnostic interface gathers appliance statistics to send to a remote service center over the remote service center interface.

16. (original) The diagnostic interface of claim 12 further comprising a user interface to facilitate service diagnostics.

17. (currently amended) The diagnostic interface of claim 12 wherein the at least one appliance comprises a refrigerator.

18. (currently amended) The diagnostic interface of claim 12 wherein the at least one appliance comprises an oven.

19. (currently amended) The diagnostic interface of claim 12 wherein the at least one appliance comprises a heating system.

20. (currently amended) The diagnostic interface of claim 12 wherein the at least one appliance comprises a cooling system.

21. (currently amended) The diagnostic interface of claim 12 wherein the at least one appliance comprises a lighting system.

22. (currently amended) A diagnostic system for providing access to service diagnostics on an appliance, the system comprising:

a local area appliance network ~~coupled to the appliance~~ configured to interconnect a plurality of appliances;

a diagnostic interface configured to be connected to said local area appliance network ~~within a building housing the appliance~~, said diagnostic interface comprising a display, wherein said diagnostic interface facilitates accepting service diagnostics commands destined for ~~the appliance~~ at least one appliance, said diagnostic interface implemented within a single device including a display device, a microprocessor configured to generate the diagnostics commands, and a power line carrier modem configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to service the ~~appliance~~ plurality of appliances via said power line carrier modem by at least one of adjusting a characteristic ~~of the~~ of at least one appliance and displaying to a technician the diagnostics commands; and

a dedicated appliance controller for receiving and executing the diagnostics commands.

23. (original) The system of claim 22 wherein the local area appliance network comprises a power line carrier network.

24. (original) The system of claim 22 wherein the diagnostic interface comprises a computer.

25. (previously presented) The system of claim 22 wherein the diagnostics interface comprises a PC card interface and an appliance bus interface.

26. (original) The system of claim 22 further comprising a communications interface between the local area appliance network and the dedicated appliance controller.

27. (original) The system of claim 22 further comprising a remote system, the remote system connectable to the diagnostic interface via an Internet connection.

28. (currently amended) The system of claim 22 wherein the dedicated appliance controller is contained within the at least one appliance.

29. (currently amended) The system of claim 22 wherein the power line carrier modem allows the diagnostic interface to communicate with ~~an appliance~~ at least one appliance via a power line carrier system.

30. (previously presented) The method of claim 1 wherein said adjusting the characteristic comprises changing, by the diagnostic interface, the characteristic of a home appliance via the power line carrier modem.

31. (currently amended) The method of claim 1 further comprising translating, by the power line carrier modem, between an appliance protocol of the at least one appliance and a power line carrier protocol.

32. (canceled)